

Appendix B: Mitigation Measures Common to all Action Alternatives

The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts. To help ensure that field activities associated with the Yosemite Valley Loop Road Project protect natural, cultural, and social resources and the quality of the visitor experience, mitigation measures have been developed. The following section discusses mitigation measures that would occur prior to, during, and after construction of the proposed improvements.

Prior to Construction

- The Construction Contractor shall prepare a Health and Safety Plan to address all aspects of Contractor health and safety issues compliant with OSHA standards and other relevant regulations. The Plan shall be submitted for park review and approval prior to construction.
- An Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan shall be prepared by the Construction Contractor for the project to address hazardous materials storage, spill prevention and response. The Plan shall be submitted for park review and approval prior to construction.
- A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Construction Contractor and implemented for construction activities to control surface run-off, reduce erosion, and prevent sedimentation from entering water bodies during construction. The SWPPP shall be submitted for park review and approval prior to construction.
- A construction work schedule shall be prepared by the Construction Contractor for the project that minimizes effects on wildlife in adjacent habitats, peaks in visitation, and noise levels near residential housing and visitor lodging areas. The work schedule shall be submitted for park review and approval prior to construction.
- The park shall develop a Communications Strategy Plan to alert necessary park and Concessionaire employees, residents and visitors to pertinent elements of the construction work schedule.
- A Cultural Resources Monitoring Plan shall be prepared by the park to ensure proper compliance with the implementation of cultural resource mitigation measures as described in this section and as stipulated in the 1999 Programmatic Agreement.
- Supervisory construction personnel shall attend an Environmental Protection briefing provided by the park prior to working on site. This briefing is designed to familiarize workers with statutory and contractual environmental requirements and the recognition of and protection measures for archeological sites, sensitive habitats, water resources, and wildlife habitats.
- Protective barriers shall be placed around areas adjacent to the project area that require special attention as identified by the park, such as specified staging areas, trees, plants, root zones, river edges, aquatic habitats, wetlands, sensitive wildlife habitats, cultural resource features, and infrastructure. Barriers shall be installed prior to construction and field inspected by natural and cultural resource personnel to verify proper placement.
- Qualified cultural resources personnel shall survey and evaluate previously undocumented historic and/or archeological features and sites prior to construction.
- All new above ground structures will be sited and designed in conformance with *A Sense of Place: Design Guidelines for Yosemite Valley*, which recommends architectural and landscape

treatments to maintain the appropriate character for development while minimizing adverse affects to landscape features such as topography, views and vegetation.

- Construction Contractor shall ensure that any imported soils, fills or aggregates are free of deleterious materials. Sources of imported materials shall be compiled by Construction Contractor and submitted for park review and approval prior to construction.
- An Exotic Plant Management Plan shall be prepared by the park prior to the commencement of any ground disturbing activities (including hazard tree removal) that specifies the locations and methods for removing existing non-native species, directions and requirements for Construction Contractor equipment washdown and/or cleaning, prescriptions for monitoring activities post construction, and reporting requirements. The Plan shall be provided to the Construction Contractor prior to ground disturbing activities.
- A Revegetation Plan shall be prepared by the park that prescribes seed collection, plant salvage, revegetation and post construction monitoring activities. The Park Botanist and Park Historic Preservation Officer shall review the Plan to verify compliance with the Vegetation Management Plan, *A Sense of Place: Design Guidelines for Yosemite Valley* and the protection of traditional-use plants.
- Preconstruction surveys shall be conducted by a qualified biologist to identify the number, type and location of special status bird, bat and aquatic species within the project area. Structures and habitats that provide hibernacula, nursery colonies, or roosting habitat are to remain and other protective measures shall be identified during surveys.
- The Underground Services Alert (USA) shall be informed by construction personnel 72 hours prior to any ground disturbance to enable Valley Utilities staff to verify the on site location and depth (elevation) of all existing utilities and services through field survey (potholing).
- A Transportation Plan shall be prepared by the Construction Contractor to ensure safe and efficient pedestrian and vehicular circulation (including park operations and emergency vehicles) during construction. The Plan shall determine the phasing and sequencing of signage to route visitors around construction areas and to day use parking and other appropriate locations in the Valley. The Plan shall be submitted for park review and approval prior to construction.

During Construction

- The Construction Contractor shall implement and comply with all requirements of the Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan prepared and approved for the project.
- The Construction Contractor shall implement and comply with all operational compliance required by the Storm Water Pollution Prevention Plan (SWPPP) issued for the project.
- Construction activities shall be monitored by qualified park natural and cultural resource specialists to ensure proper compliance with the implementation of mitigation measures described in this Appendix.
- Construction waste shall be separated into recyclable materials, green waste, and other debris that shall be placed in refuse containers daily and disposed of weekly. Recycled, toxic-free, and environmentally sensitive materials, equipment, and products shall be utilized whenever possible. Burning or burying of waste is strictly prohibited.
- Wastewater contaminated with silt, grout, or other by-products from construction activities shall be contained in a holding or settling tank to prevent contaminated material from entering watercourses or wetlands.

- Hazardous or flammable chemicals shall be prohibited from storage in the staging area, except for those substances identified in the Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan. Hazardous waste materials shall be immediately removed from project site in approved containers.
- Machinery and equipment shall be parked over containment pads designed to trap any leaking oil, fuel or hydraulic fluids and inspected daily.
- Secondary containment shall be required for all fuel storage. Routine oiling, lubrication, and refueling shall be conducted with secondary containment and is prohibited in the River Protection Overlay, water courses or wetlands at any time.
- Spill response materials including absorbent pads, booms, and other materials to contain hazardous material spills shall be maintained on the project site to ensure rapid response to spills.
- The Park Project Manager shall be immediately notified of all spills or releases of hazardous materials. Any spill release shall be digitally photographed or videotaped as part of response activities.
- Disruption of utility service will require advanced notification to the park, concessionaire and residents prior to scheduled disruptions. Unexpected interruptions due to construction activities shall promptly be reconnected.
- The Construction Contractor shall implement and comply with the Exotic Species Management Plan prepared by the park for the project.
- All construction tools and equipment entering the park shall be cleaned by means of pressure washing and/or steam cleaning to arrive on-site free of mud or seed-bearing material. Each piece of equipment shall undergo inspections immediately prior to entry of the park.
- Clearing of vegetation and ground disturbance shall be minimized to the greatest extent possible.
- Vegetation salvage, seed collection and revegetation shall be implemented as defined in the Revegetation Plan.
- Topsoil shall be salvaged, segregated during storage, and reused in the proper location and depth. Wetland soils shall be salvaged and reused as fill in wetland areas. Stockpiles of soils infected with fungal pathogens (root rot) must not be moved and reused in non-infected areas of the park. Equipment buckets, tires and hand tools used in areas containing root rot shall be cleaned prior to removal.
- Soil and stump treatment prescriptions shall be executed according to the park's Root Rot Management Guidelines and the park's Forester. All stumps from excavations shall be disposed of in a legal manner outside of the Yosemite National Park boundary.
- Stationary noise sources shall be located as far as possible from residential housing and visitor lodging and camping areas. Construction equipment shall not be left running while standing by. All on-site work that generates noise levels above 76db at the site boundary in the vicinity of residential housing and visitor lodging and camping areas shall be done between 8am and 5pm.
- Lockable, bear proof dumpsters and food storage containers shall be delivered to the construction site by the park for construction crew use.
- Excavation sites must be monitored or covered to avoid trapping wildlife and routes of escape should be maintained. The construction site shall be inspected daily for appropriate covering and flagging of excavation sites. Each morning the project area shall be inspected for wildlife trapped in excavation pits. A qualified biologist will be available to inspect all excavations before refilling occurs.

- A Construction Contractor representative shall be designated to monitor the worksite daily for proper disposal of waste, wrappers, and food packaging.
- Site watering and slow truck speeds shall be managed as appropriate to control dust. When hauling dry materials, truck beds will be securely covered to prevent blowing dust or loss of debris.
- Appropriate signage shall be located and sequenced during construction activities to ensure safe and efficient traffic and pedestrian circulation. Information about traffic detours and recreational closures shall be provided to visitors as they enter the park at each entrance station.

Post Construction

- All tools, equipment, barricades, signs, surplus materials, debris, and rubbish shall be removed by the Construction Contractor from the project work limits upon project completion.
- The park will monitor the success of revegetation efforts. Plant materials used for revegetation shall remain alive and in a healthy, vigorous condition for a period of one year after final acceptance of planting. The project site shall be monitored by qualified park personnel in accordance with the Exotic Plant Management Plan and Revegetation Plan. All plants determined to be in unhealthy condition shall be replaced.
- The park will monitor and remove invasive species from the project area for a period of four years post construction in accordance with the Exotic Plant Management Plan and Revegetation Plan.